

**Abstract of the disclosure**

This invention refers to the manufacturing of structural and impervious  
5 members by slurry-infiltration in a 3-dimensional mat system, which consists of single  
layers (2). The single layers are preferably meshes. The structural system is a  
composite material consisting of a 3-dimensional micro reinforcing and sieving mat  
system bonded in concrete. The aggregate (1) can be precisely positioned  
horizontally and vertically in the member by variation of the mesh width of the single  
10 layers (2). The sieving effect by the variation of the mesh width in vertical direction  
guarantees a positioning of aggregate by size. By this effect the load capacity, the  
stiffness and the crack propagation can be controlled and adjusted precisely.

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